Развитие коммуникативной компетенции будущих специалистов сферы культуры при разработке и применении веб-квестов дидактического назначения

Проблема и цель. Формирование востребованных профессиональных компетенций при подготовке работников культуры предполагает использование различных дидактических технологий, в том числе игровых сервисов и платформ. Цель исследования – выявить особенности применения веб-квеста как игровой технологии при обучении будущих специалистов сферы культуры для развития их коммуникативной компетенции.


Результаты. Разработка и применение веб-квестов в экспериментальной группе реализовано по следующим этапам: анализ запросов общества, возможностей программных ресурсов в соответствии с особенностями профессии и социально-культурной деятельности; применение цифрового сервиса; продумывание сюжетной составляющей и маршрутов движения участников; составление плана диалогов между персонажами и т.д. Выявлены статистически достоверные различия в качественных изменениях, произошедших в педагогической системе (χ² = 10.693; p < 0.05).

В заключении представлены выводы об особенностях применения веб-квеста для развития коммуникативной компетенции: необходимость поиска информации для сюжета и места реализации веб-квеста; определение персонажей и диалогов между ними; изучение интерактивных возможностей сервиса; составление текстов для карточек с заданиями; выбора музыкального сопровождения и т.п. Сформулированы трудности предлагаемых нововведений: творческий характер деятельности при разработке социокультурного сюжета и содержания игрового пространства; зависимость от программного обеспечения в учреждениях культуры; технические сбои оборудования; сложности формирования и функционирования команд.

Ключевые слова: социокультурное пространство, цифровизация общества, образовательный квест, коммуникация, информационное взаимодействие, игровая механика, программные ресурсы, Joyteka

Ссылка для цитирования:
Developing the communicative competence of future cultural sector specialists when designing and applying didactic web-quests

The problem and the purpose. The formation of demanded professional competencies in the training of cultural workers involves the use of various didactic technologies, including game services and platforms. The purpose of the study is to identify the features of the use of a web-quest as a game technology when training future cultural specialists to develop their communicative competence.

Research methods. The methodology is based on the analysis of the potential of web-quest technology for higher education, support for UNESCO initiatives and public policy. When developing a series of problems the socio-cultural space of the quest takes into account the requirements of the digital society, the possibilities of software resources in accordance with the profession specifics and the needs of the students themselves. The platform Joyteka.com is used, which allows the user to create web-quests, quizzes, tests. 58 students of the Vyatka State University are involved (Russian Federation). Web-quests are included in the disciplines “Modern Information Technologies”, “The Russian Language and Culture of Speech”, “History of Culture”, “History of the Vyatka Region”, in individual practice tasks. The authors used the method of assessing communication and organizational tendencies. The bases for practice: museums of the city and region, houses of culture, exhibition centers. Statistical data processing was performed by means of Pearson's χ² (chi-square) test.

Results. The development and application of web-quests in the experimental group was carried out in the following stages: analysis of the community demand, the possibilities of software resources in accordance with the profession specifics and socio-cultural activities; the use of digital service; thinking over the plot component and routes of movement of participants; drawing up a plan of dialogues between characters, etc. Statistically significant differences were revealed in the qualitative changes that occurred in the pedagogical system (χ² = 10.693; p < 0.05).

Conclusion presents deductions about the features of applying the web-quest to develop the communicative competence: the necessity to search for information for the plot and the place of implementation of the web-quest; designation of characters and dialogues between them; the study of interactive features of the service; the compilation of texts for cards with tasks; the choice of musical accompaniment, etc. The difficulties of the proposed innovations are formulated: the creative nature of the activity when designing the sociocultural plot and the content of the game space; dependence on software in cultural institutions; technical failures of equipment; difficulties in forming and functioning of teams.

Keywords: sociocultural space, digitalization of society, educational quest, communication, information interaction, game mechanics, software resources, Joyteka.

Introduction

The relevance of the presented study is due to the following factors:

1. According to the UNESCO Charter, "... peace must be based on the intellectual and moral solidarity of humanity." In other words, the international organization designates its aspirations for a peaceful, free and equal life together. To achieve this, it is supposed to develop intercultural communication and expand opportunities to support education, culture, science, and information interaction [1]. I. Manor, Z. A. Huang state that the dialogue of cultures should contribute to self-empowerment, transforming relations in a digital society, changing a person's ideas about himself and the world around him [2].

N. A. Komleva notes that the education system (in terms of training and retraining of personnel) of Russian universities in the field of contemporary art lags behind the level and educational programs of leading world countries. This circumstance, according to the author, significantly complicates the mobility of modern graduates and reduces the guarantee of their successful employment in other countries [3]. The conclusions of the study urge scientists to think about how to revise higher education programs in creative professions; according to what plan to train personnel; apply technologies providing education adapted to the conditions of modern reality.

A. V. Dmitrieva, A. N. Malakhov point out that it is necessary to design educational programs for training bachelors (masters) in the socio-cultural sphere, taking into account which professions are in demand today and also which will be relevant tomorrow [4]. The key question, according to the authors' conclusion is with the help of which technologies is it possible to make higher education effective [5].

According to the cultural sector employees interviewed by N. V. Efremova, E. S. Shtanko, P. I. Efremova, the training program for future cultural sector specialists should become more technologically advanced [6]. Theaters, museums, art houses need highly qualified specialists who are able to apply software tools and digital methods in organizing exhibitions, excursions, etc.

Thus, on the one hand, the cultural sector as a whole is experiencing a shortage of personnel who actively use digital services (computer graphics, video editors, AR applications, etc.) [7].

2. Within the framework of professional subjects, students of the Vyatka State University of the Faculty of History, Political Sciences and Cultural Studies study the basics of cultural studies, history and art history, time management, foreign language, etc. Graduates of the field of training: 51.03.01.02 Cultural Studies (bachelor's degree) work in federal, regional, municipal government bodies; print and electronic mass media; publishing houses; advertising, information and travel agencies; cinema and concert organizations, museums, theaters, music schools and philharmonic halls. Their responsibilities include information and communication activities: negotiations with agencies, fulfilling various types of contracts, maintaining relations with companies, television and radio stations [8].

N. G. Panova notes that highly qualified employees in the cultural sector actually have to solve tasks of professional communication in the leisure industry on a daily basis, carry out information interaction and apply mechanisms of influence in the practice of organizing mass events. For example, to organize an exhibition of computer works, communication
of artists of different styles, use the media to support the event, etc. [9]. Directions in the field of digital transformation of socio-cultural education involve updating the content of disciplines, introducing technical innovations as teaching tools [10].

3. The "web-quest" technology is one of the forms of organizing an information and educational environment that has the necessary resources, both in educational and career guidance activities [11].

Thus, a highly qualified specialist in the sector of culture and art is obliged to possess general cultural competencies, including communicative ones.

According to E. M. Bonsignore, the activity of developing and filling web-quests designed with the help of digital services and formatted on the Internet creates additional conditions for increasing the professional motivation of students, their self-realization and self-affirmation [12].

However, as N. N. Vekua, A. A. Lubsky, M. S. Perevozchikova, Yu. N. Folgerova convincingly prove, the design and application of a didactic web-quest with digital technology tools can be accompanied by a number of objective difficulties: lack of development experience, insufficient level of technical skills; time costs; difficulties in correlating the content of the training program with resources of the information space of the quest and the planned learning outcomes [13].

The authors also identified the conditions for effective work in the environment of an educational web-quest:
- correlation of future labor functions with the possibilities of digital services;
- selection of a software tool that best corresponds to the specifics of the training program, the priorities of the development of the intercultural community and the needs of students;
- multi-stage work on designing the environment of the quest room: the logic of events, the interaction of elements and characters, the development of the plot, the achievement of the goal of the game.

The hypothesis of the study is that the design of a didactic web-quest will contribute to the development of communicative competence of socio-cultural sector specialists if it takes into account the principles of the "web-quest" technology and the specifics of the graduates' work.

The following tasks were identified as the main ones:
- to clarify the essence of the concept "didactic web-quest" for the training of specialists in the field of culture and art;
- to supplement the existing requirements for the development of the communicative competence of graduates of the educational program, taking into account the principles of web-quest functioning;
- to describe the stages of work on the design and active application in practice of a didactic web-quest;
- to test experimentally the effectiveness of the proposed option to improve training of specialists.

So, the purpose of the study is to study the features of organizing practical work of future cultural sector specialists when designing and applying web-quests to develop their communicative competence.
Materials and methods

The following methods were used in the work: theoretical analysis and generalization of literature in clarifying the potential of the "web-quest" technology for higher education, to support the activities of UNESCO, in identifying problems of including web quests in the training of cultural sector specialists.

The authors consider the didactic web-quest as an educational travel game involving a general game situation (plot). All elements of the web quest are subordinated to a common socio-cultural task. In the process of completing the web quest, future specialists in the field of culture and art perform independent tasks, acquire skills of creative work and self-organization.

The composition of the communicative competence, in the authors’ opinion, includes verbal, speech, linguistic and socio-cultural competencies.

The practical experience of using web quests in the socio-cultural sphere was studied: a virtual quest through the halls of the Pushkin State Museum of Fine Arts, an interregional web quest "Journey through the Museums of Russia", etc.

Software tools were analyzed: Quest model, Urban Quest, Joyteka.com, Surprise me, Genially, QuizWhizzer, Seppo, audio tours, etc.

The provisions of professional standards for cultural workers, strategies of the state cultural policy in Russia were taken into account when developing a system of training tasks for filling web quests.

When comparing digital services for the development of web quests, the following criteria were used: the type of resource (application/platform), financial basis (paid / free), functionality (taking into account the specifics of future work), interface and design, existing experience in using digital service in practice.

Based on the relevant analytical work, the service Joyteka.com (previous name Learnis) was selected. Its advantages include available free functionality, the possibility to create 20 interactive sessions; intuitive interface, multilingual support; available methodological developments and video tutorials on working with the platform.

The method "Communicative and organizational inclinations" (authors V. V. Sinyavsky, V. A. Fedoroshin) was used in the diagnosis of students' communicative competence. The questions of F. Ryakhovskoy and L. Mikhelson's tests were also analyzed. However, it is the materials of the methodology "Communicative and organizational inclinations" that make it possible to identify and evaluate the behavior of future specialists in situations of professionally-oriented socio-cultural communication.

Rationale for selection. The test results allow you to determine the level of development of communication skills and skills; evaluate the behavior of future professionals in professional-oriented communication situations.

The corresponding levels of development: low, below average, average, high, very high – are set in accordance with the instructions to the methodology.

58 students of the Vyatka State University (Faculty of History, Political Sciences and Cultural Studies) took part in the study. All respondents are first- and second-year students. Direction of training: 51.03.01.02 Cultural Studies (bachelor's degree).

Applications for creating didactic web quests are used in the course of the disciplines "Modern Information Technologies", "Russian language and speech culture", "History of
Culture", "History of the Vyatka Region" and during various types of practices (educational, introductory).

Practice bases: museums of the city and region, houses of culture, diorama, mass media. The average age of respondents was 20 years (52% of girls and 48% of young men).

Statistical data processing was performed using Pearson's chi-squared test ($\chi^2$).

**Literature review**

Currently, various studies are being conducted in science to identify the possibilities of modern digital technologies for gamification of cognition and professional development; descriptions of the essence of the quest, its potential and features of inclusion in the learning process for higher education.

D. Metikaridis, S. Xinogalos point out that under the influence of digitalization, the structure and requirements for the competencies of specialists change, the tasks that need to be solved become more complicated [14]. Traditional positions are being transformed towards multi-functionality, employees are forced to constantly expand and "reassemble" the set of knowledge for emerging tasks. There is a tendency for competence to shift into a skill. Thus, knowledge of the programming language often appears in job descriptions along with knowledge of a foreign language. Basic competencies and skills common to all digital professionals are highly valued: English language proficiency, business communication, project management, 3D-modeling, business and presentation preparation skills, analytical thinking, result orientation, time management [15].

N. A. Lozhkina et al. consider innovations in teaching disciplines of cultural studies, carry out a factor analysis of professionally-oriented foreign language communication of future specialists in various training programs [16].

A. Martínez, de D. Juan note that the phenomenon of "communicative competence" has been under research for a long time. There has been accumulated quite a rich experience in methodological support of communicative-oriented teaching of foreign language speech [17].

The authors note that communicative competence is considered as knowledge that a student must master, and as a skill that he must learn to use in a specific situation.

A. Pursi considers "communicative competence" as the key to describe communication. This term implies the ability to correlate language means with the tasks and conditions of communication, to organize communication taking into account language norms and communicative viability [18].

L. Dzasezheva et al. explore popular digital platforms that broadcast diverse opportunities for the development of competencies in intercultural interaction. Scientists consider modern technologies of distance and online learning, as well as present modern educational practices [19].

M. R. Reshma et al. represent the experience of using innovations and computer methodologies in the training and retraining of specialists in the socio-cultural sphere [20].

T. Terzidou et al. reasonably conclude that a person of modern society in almost any professional activity has to face a diverse amount of information (text, graphics, fabric, textiles, stone, etc.). etc.) [21].

Among the reasons that significantly reduce the potential of software applications to support quest technology in the context of the development of a digital university there are
motivation and the ability to use a digital service, the necessity to be creative (both for high school tutors and students themselves); paid subscriptions for many gaming platforms [11]. The educational quest, according to the conclusions of M. Chang et al., is a pedagogical technology that integrates the elements of the game into a series of didactic problems [26]. The research of M. Chang et al. is accompanied by the analysis of existing software solutions, their interface, and features of technological support.

N. N. Vekua et al. consider the educational quest as a certain problem with a research orientation [13]. The web-quest, according to the conclusions of I. N. Verkholetova, A.V. Ponachugin, can also be interdisciplinary. For example, with the help of QR codes, the participants of the game receive tasks when studying algebra. Next, the players convert decisions in a text document and upload the file to the cloud. The specifics of working with QR codes, cloud technologies and text editors are studied before, within the framework of another discipline [23].

S. Jarmak et al. point out that the term "quest" was initially interpreted as a way of plotting – the journey of heroes to a certain goal through overcoming obstacles [24]. L. Amali et al. consider options for designing web-quests: according to the project method, competition. The development and filling of the quest according to the competitive principle is undoubtedly effective in some cases. For example, the development of high emotional stability, self-belief, persistence, striving for victory, etc. [25]. Z. Zainuddin and co-authors note that most of the digital tools and applications used are included in the cognitive process only at some separate stage of activity to solve a certain system of tasks for educational and career guidance purposes, or to develop mental processes: thinking, memory, attention and imagination [26].

This state of affairs, undoubtedly, does not meet the specifics of the implementation of web-quest technology in the process of training specialists in the socio-cultural sphere, the essence and structure of communicative competence.

N. G. Panova also analyzes what knowledge and skills students should have – future specialists in socio-cultural activities, based on the fact that the cultural sphere is increasingly in need of personnel of IT specialties and new technologies, as well as marketing (including SMM). The author argues that it is necessary to carefully study the requirements of potential employers to the level of graduates’ communicative competencies. Thus, successful activities of a theater director, a tour guide, a museum employee today and in the future will depend on the existing high level of social intelligence and communicative competence [9].

Effective training of specialists in leisure activities with the use of innovative technologies, and in particular, a web-quest, according to the conclusions of A. Y. Lagunov, N. S. Podorozhnjak, is a didactic process aimed at improving the characteristics of a student as a future specialist, preparing for active intercultural communication formed by the unity of universal and professional competencies [27].

The work of N. N. Vekua et al. presents a study aimed at studying the educational possibilities of quest-rooms [13]. The authors describe local applications (for example, Quandary), online services that allow you to create so-called web-quests (Ribbon Hero, Zunal, Surprise Me, Quester, etc.). The authors point out that the quest-room is a separate type of web-quest. They view it as an isolated information space filled with interacting characters and limited by strict rules of the game.

Thus, the analytical work performed makes it possible to conclude that:

1. The educational quest-room allows to combine naturally a game and didactic tasks. At the same time, students gain communication skills in the course of thinking through the plot
of the quest, discussing characters, events. Simultaneously, digital technology and graphic tools are being mastered.

2. An option for designing an educational quest is a quest-room (or a quest of the "get out of the room" type). The corresponding game socio-cultural space can be not only fully adapted to a specific plot, but also to an educational training program, to the specifics of working career.

3. The organization of a web-quest, for example, according to the stages and principles of the project (goal setting / scenario writing; distribution of tasks, functions; implementation; completion), will allow the game tutor to spend less time on preparation. At the same time, the didactic effect of gaming technology will not be lost.

Thus, there is an objective problem, which is the need for additional research into the students' inclusion into activities to create a didactic web-quest. This change allows developing the communicative competence of specialists in the field of culture.

Research program

The main purpose of the experiment was to test the effectiveness of involving specialists in the field of culture and art in the design of didactic web-quests for the development of their communicative competence.

At the preparatory stage of the experiment, the tutor analyzed modern achievements of science and technology regarding the potential of using innovative digital technologies to support culture and art.

It was determined that in order to achieve the goals of state policy it is useful for cultural institutions to include in the work of expositions and exhibitions:

- elements of interactivity, innovations from the field of science and technology. For example, managers and staff should involve as wide an audience as possible in active socio-cultural activities using various methods and techniques (AR/VR, three-dimensional graphics, etc.).
- informational interaction involving direct personal communication of the majority of employees, visitors. However, historical authenticity and museum traditions should not be lost.

At the preparatory stage of the experiment, the level of students' communicative competence was also diagnosed based on the materials of the methodology "Communicative and organizational inclinations" (authors V. V. Sinyavsky, V. A. Fedoroshin) [28]. Students were offered 40 test questions, which had to be answered "yes" or "no". Further, the answers were processed according to the instructions of V. V. Sinyavsky, V. A. Fedoroshin. And each component of the diagnosis (communicative or organizational) was evaluated by a coefficient in the range from 0 to 1.

The level is "Very high" (0.76-1) when the student feels the need for communication and actively strives for it. He demonstrates knowledge of the necessary languages, ways of interacting with surrounding and remote people and events, skills of team working. The master's student has various social roles in the team. The student is proactive, independent in decisions, defends his opinion in all cases (while striving to have it recognized by everyone around him). With the help of digital services, minimal auxiliary materials, he is able to organize and conduct quests, quizzes, travel games, etc.

The level is "High" (0.66-0.75) when the student feels the need for communication, but does not always actively strive for it (for example, depending on the mood). Demonstrates
knowledge of the necessary languages, ways of interacting with surrounding and remote people and events, skills of working in a socio-cultural environment. The master's student has various social roles in the team. The student is proactive in most didactic (or professional) situations. The student is independent in decisions, defends his opinion (but does not strive for it to be recognized by everyone around him). With the help of digital services, minimal auxiliary materials, he is able to organize and conduct quests, quizzes, travel games, etc.

The level is "Average" (0.56-0.65) when students strive for contacts in a socio-cultural environment, do not limit the circle of their acquaintances. However, they have difficulties in communication, which is expressed in uncertainty, shyness, embarrassment, problems in building professional and personal relationships. Students defend their opinions, plan the work in real and virtual educational spaces. With the help of digital services, minimal auxiliary materials, and other organizers, they are able to design and conduct quests, quizzes, travel games, etc.

The level is "Below average" (0.46-0.55) when the student does not feel the need for communication, does not strive for it. The student is not proactive in most didactic (or professional) situations. The student is rarely independent in decisions, does not defend his opinion (but does not strive for it to be recognized by everyone around him). He is able to conduct quests, quizzes, travel games using digital services in a socio-cultural environment only in a team of other co-organizers.

Thus, according to the results of the diagnosis of communicative abilities, control and experimental groups were formed. Each of them had 29 students of the Vyatka State University (Faculty of History, Political Sciences and Cultural Studies). All respondents were 1st and 2nd years students. Direction of training: 51.03.01.02 Cultural studies (bachelor's degree).

Experimental stage. In order to implement the conclusions obtained it was decided to consider in detail the technology of web-quests during the training of specialists in the field of culture and art in the course "Modern Information Technologies" (theoretical analysis of the topic "Specialized digital tools", "Fundamentals of working with information systems", etc.).

At the same time, practical experience of using web-quests in the socio-cultural sphere was studied within the framework of the disciplines on the history of art: a virtual quest through the halls of the Pushkin State Museum of Fine Arts, an interregional web-quest "Journey through the Museums of Russia", etc.

From the entire range of tools (Quest Model, Urban Quest, Joyteka.com, Surprise me, Genially, QuizWhizzer, Seppo, audio tours, etc.) the service Joyteka.com was chosen. It was previously called "Learnis".

The free version Joyteka.com has the following possibilities: 20 created lessons, collecting the results of completing the quest, collecting the results of watching the video, the option to show a short result to the viewer, setting up the option to rewind the video forward, the function of mixing terms at startup, the option to reuse the topic, five participants in the quiz; collecting test results; the option to show a short result after the test; the option to skip questions.

It is Joyteka.com resources that correspond as much as possible to the didactic goals of training specialists in the field of culture and art, to the directions of their subsequent working career.

Then in the classes "Russian language and culture of speech", "History of culture", "History of the Vyatka Region" as part of the topics "Culture of speech as part of universal
“culture” (1 hour), "Traditions of nations (language, religion, culture and life)." (2 hours), "Modern socio-cultural the situation" (2 hours), "My small homeland" (2 hours) students of the experimental group presented developed web-quests.

During the introductory and educational practices, the students of the experimental group actively used and modified the developed didactic web-quests in accordance with the requirements of the mentors.

Interpretation stage. Evaluation and analysis of the results of the experiment, formulation of conclusions about the impact of the activities of future specialists in the field of culture and art on the design and use of web-quests on the development of their communicative competence.

Research results

Summarizing the above concepts of "web-quest", the authors consider a didactic web-quest as an educational travel game involving a general game situation (plot). All elements of the web-quest are subordinated to a common socio-cultural task: organizing people's leisure, satisfying and developing their cultural needs, creating conditions for the self-realization of each individual, revealing their abilities, creative potential, self-improvement.

The communicative competence of a specialist (in particular, a culture specialist) is the knowledge, skills and abilities necessary to understand others and generate their own speech behavior programs that are adequate to the goals, spheres, and situations of communication.

We will understand communicative competence, according to A. V. Khutorskoy [29] as:

- knowledge of the necessary languages;
- knowledge of ways to interact with surrounding and remote people and events, team work skills;
- performing various social roles in the team.

In the process of creating a web-quest, future specialists in the field of culture and art determine the subject of the resource, search for information to fill the web-quest, develop a chain of tasks – a code for the door leading from the room.

In the process of performing the work described, in the opinion of the authors, additional conditions are created for the development of students' communication skills. Students have to study:

- to find an effective approach to employees of cultural institutions and visitors;
- to present information reliably;
- to formulate statements in such a way that the whole meaning is fully understood by the interlocutor (real or virtual);
- to establish relationships, to make a good impression on the interlocutor.

The game mechanics in a web quest is a set of rules and procedures that guide the actions of the characters. For example, the mechanics of a "Random Event": characters begin to act, and events in the quest occur when a door opens, a window opens, or a book on a shelf opens.

The system of game mechanics complements the process of searching for information, making decisions, performing actions based on the received data that correspond to an educational or communicative situation.
Web-quest on the platform Joyteka.com represents a closed game space. However, it can be fully adapted to a specific socio-cultural theme. At the same time, each content element of the web-quest is designed to meet one common story, including thematic tasks. Web-quest game mechanics implemented on the platform Joyteka.com assumes: a title page (introduction page), a chain with tasks. To complete a web-quest, a list of sources may be offered.

A web-quest conducted in a cultural institution must also comply with the following rules:

- to be an unconventional form of leisure organization, but safe for all participants (in technical, environmental, informational terms);
- to provide for the variability of motions/movements. For example, to increase cognitive interest, to take into account age characteristics;
- to comply with socio-cultural themes. At the same time, the decoration of the "stops" in the web-quest should contain a hint – the direction for continuing the way.

The web-quest contains a set of interactive automated elements, interiors, hidden elements: curtains, books, a magnifying glass, a rag.

The most interesting thing happens during the game: participants interact with each other, with interior elements, with cultural objects. Players find various artifacts and apply them in a special way. As a result, not only new theoretical material is mastered, but also secret doors are opened, mechanisms are started. The surprise effect is an important component of a web-quest.

Didactic tasks can be of two types: search tasks (find and attach somewhere, pull, etc.) and logical riddles. The latter are responsible for the plot component in order to preserve the legend of the quest and socio-cultural unity.

In order for the developed web-quest to be truly didactic, it is necessary to carry out preparatory work on thinking through the content of a set of tasks that contribute to the formation of socio-cultural knowledge and supra-subject skills and habits.

Effective inclusion of digital platforms in the organization of a didactic web-quest involves: software support; organizational support, methodological recommendations for game mentors and employees of socio-cultural institutions, rules for participants, evaluation principles and prizes; plot; game space with rules, characters, levels, etc.

Didactic web-quests were designed within the course "Modern Information Technologies".

Design stages:

I stage. Correlation of employers' requirements, the essence of communicative competence, planned results of socio-cultural activities, UNESCO priorities and public policy directions with the possibilities of digital services.

II stage. The study of a digital resource, its functionality. Correlating them with the goals of socio-cultural activities, the possibilities of cultural institutions and the needs of students.

III stage. Application of digital technology for designing a web quest. Thinking over the socio-cultural plot component for the resource, filling the game world, the content of tasks and moving along the chain of problematic situations, choosing the type of room.

IV stage. Drawing up routes for potential participants to move around the quest room, a plan of dialogues between characters, using digital service tools to implement possible routes.

V stage. Studying additional services for the development of communicative competence, interface. For example, the Joyteka.com platform section – a quiz.
VI stage. Correlation of the acquired knowledge, the formed communicative competence with the planned educational goals, the requirements of society and the interests of students. The practical implementation of the above stages of work when creating a web quest for the socio-cultural space was carried out in classes "Modern Information Technologies", "Russian language and speech culture", "History of Culture", "History of the Vyatka Region" and during the period of practice.

On the first stage, the participants of the experimental group determined that the sphere of culture and art in the region is developing responding to all modern challenges. Cultural institutions (in particular, in Kirov) face tasks of an international format: the segment of libraries, museums, etc. should be developed taking into account the needs of visitors. The participants of the experiment also revealed that professions from the sphere of socio-cultural activities in the city are growing younger, and the demand for qualified personnel is growing.

For example, museum workers in Kirov note the importance of communication between generations in order to realize and preserve continuity, the connection of times. Participation in an interactive exhibition or a theatrical production provides, according to many cultural workers, additional opportunities for visitors to experience history, draw parallels and feel the involvement of their fate in the fate of their hometown.

Library staff advises young professionals to communicate more with readers, talk about their feelings from what they have seen and read.

Stage II. The study of a digital resource, its functionality. For example, the Learnis educational platform has many didactic capabilities, it is multifunctional. Students studied the tools of Learnis: registration on the website, preparation of socio-cultural material for the quest-room; selection of the interiors of the quest-room, editing, checking for correctness; use of the quest-room in socio-cultural activities.

At stage III, specialists in the field of culture and art designed a web-quest according to the selected template. To get out of the room, you need to enter the key to the door. It can be found out only after all the hidden tasks are completed. To find them, you need to point the mouse at things in the room and look for clues. However, tasks may not always be visible. Sometimes it is necessary to perform several actions before the exercise appears to the student. For example, in the "green room" it is necessary to pour water into the kettle and boil it. After that, the steam hits the mirror and the first exercise will appear. The second is hidden in books.

After all the tasks have been completed, the participant can press the door and enter the key. As a rule, the key is the answers to the tasks that you specify during the planning of the web-quest. The participant enters the answers and, if the tasks are completed correctly, the door opens.

Here are examples of tasks that the participants of the experimental group have thought out for a didactic web-quest:

1. Who renamed Khlynov to Vyatka? Variants: a) Ivan the Terrible; b) Boris Godunov; c) Peter I; d) Catherine II.
   Answer. Khlynov was renamed Vyatka in 1780 by decree of Empress Catherine II.

2. What is the real surname of S. M. Kirov? Variants: a) Radomyslsky; b) Scriabin; c) Kostrikov; d) Urzhum.
   Answer. The real surname of the Soviet statesman and politician Sergei Mironovich Kirov, after whom the city of Vyatka was renamed in 1934, is Kostrikov.

Answer. The Diorama was opened in 1977 and was an event for Kirov. People hurried to look at the three-dimensional picture dedicated to the 60th anniversary of the October Revolution.

4. "Musolyt" (kick around) in the Kirov dialect means: Options: a) talk about one thing many times; b) get dirty; c) throw out the trash; d) sew from muslin.
Answer. To talk about one thing many times.

Stage IV. For example, the participants of the experimental group made up such an explanatory note: "Look for notes with questions around the room. There are 5 of them. Click on everything, move objects. Distract the dog, because it has one of the notes. Write down the letters of the answer in the order of the questions (for example: AAAAA) This will be the door code. Go to the door and dial the code."

Stage V. Let's describe the activities of the students of the experimental group when studying the possibilities of the platform on the example of the service – "Terminological Game". The idea is for the participant to explain some term or word in a limited time. It is great for memorizing and repeating words in English. In the same way, a game is created in the "Products" tab and a transition takes place to the field for editing terms. Here, unlike the previous tasks, you do not need to insert pictures. This task is text-based. Each word or term that needs to be explained must be written on a separate line.

Stage VI. A didactic web-quest for the development of the communicative competence of future specialists in the field of culture and art involves its subsequent improvement and use in work. For example, some of the participants were involved in testing the quest-adventure "Vyatka Kikimora". It is currently included in the Russian app store RuStore. Within the framework of the Vyatka Kikimora project, 7 figures of these fairy-tale characters have been installed in the city. Each of the figures has a QR code with which you can participate in the search for everyone. The basis for the choice of locations was, among other things, the communicative activity of the students of the experimental group.

Other students in 2019, as part of the Vyatka Talker team, organized a web-quest "Regional peculiarities of Russian speech" for pupils of school No. 48 in Kirov. According to the results of the web-quest, the participants designed an illustrated electronic dictionary of Vyatka words.

Web-quests were included in the study and development of media reality, in the establishment of socio-cultural links between a person and information processes, in the study of the laws of mass communications; mastering the language of the media. With the support of web-quests, students of the experimental group were involved in modeling the roles and functions of specialists in the field of culture and art. The conditions of functioning of certain types of old and new media, understanding of various ways of meaning and diversity of cultural interactions in the modern global information world were studied.

So, in the process of designing a web-quest, the participants of the experimental group studied the necessary languages and ways of interacting with surrounding, remote people / events. They acquired the skills of team work, i.e. additional conditions were created for the development of their communicative competence.

However, not gaining experience in organizing a web-quest is a goal in itself to use digital applications in the activities of cultural institutions. The story is important, its emotional effect on the education of the reader/viewer, the formation of his personal characteristics (patriotism, curiosity, diligence, etc.).

Students in the control group also studied new digital technologies, materials of courses "Modern information technologies", "Russian language and speech culture", "History of
Culture", "History of the Vyatka Region". However, they were not involved in special work on the development and use of web-quests.

The results of the questionnaire using the method of "Communicative and organizational inclinations" (authors V. V. Sinyavsky, V. A. Fedoroshin) for each group of participants before and after the experiment are presented in Table 1.

### Table 1

<table>
<thead>
<tr>
<th>Level</th>
<th>Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experimental (29 students)</td>
</tr>
<tr>
<td></td>
<td>Before the experiment</td>
</tr>
<tr>
<td></td>
<td>Before the experiment</td>
</tr>
<tr>
<td>«Very high»</td>
<td>1</td>
</tr>
<tr>
<td>«High»</td>
<td>1</td>
</tr>
<tr>
<td>«Average»</td>
<td>6</td>
</tr>
<tr>
<td>«Below average»</td>
<td>8</td>
</tr>
<tr>
<td>«Low»</td>
<td>8</td>
</tr>
</tbody>
</table>

Thus, $\chi^2_{\text{observed1}} < \chi^2_{\text{critical}}$ (0.253 < 9.488), and $\chi^2_{\text{observed2}} > \chi^2_{\text{critical}}$ (10.693 > 9.488). Therefore, the shift towards increasing the level of communicative competence of specialists in the field of culture and art in the experimental group can be considered non-accidental.

**Discussion**

When discussing the results, the participants of the experiment noted that they had gained communication experience not only when searching for specific information on the Internet resources, but also with official organizations through online appeals. For example: students, as part of the design of the web-quest, gained a positive experience of accessing the archives of libraries, compiled an extensive printed photo material about the Kirov airport, the history of the Diorama.

Some participants gained experience in communicating with the older generation. They learned the traditions of the Vyatka region, the history of holidays and Whistling dances. All photographic materials, texts and oral stories were incorporated in the development of web-quests.

Performing a qualitative assessment of the results of the questionnaire using the method of "Communicative and organizational inclinations" (authors V. V. Sinyavsky, V. A. Fedoroshin), we note that 59% of the students in the experimental group received a level of "Very high" and "High". Initially, this value was equal to 10%. The number of students with a "Low" level of communicative competence decreased from 31% to 10%.

The dynamics of results in the control group is not so significant. The level of communicative competence "Very high" and "High" was diagnosed in 24% of students. Initially, this figure was equal to 13%. The number of students with a "Low" level of communicative competence was 28% (compared to 31% at the entrance testing).

Also, the participants of the experiment highlighted the difficulties of the proposed innovations:
• the creative nature of the activity in the development of the socio-cultural plot and 
  the content of the game space;
• dependence on software in cultural institutions; technical failures of equipment;
• a long process of forming teams of like-minded people to design and conduct quests.

A significant result of the work is the description of the basic ideas of the approach that 
expand the ideas of M. Chang et al. [22] about the features of designing a didactic quest in 
the context of UNESCO priorities and state cultural policy. In addition, according to the Kirov 
TV company and according to the results of a survey of residents of the city, the project 
"Kikimora Vyatskaya" as an urban quest legend became the landmark of the year.

Working out the scenario of a cultural event, a reasonable choice of a digital service; 
correlation of the socio-cultural component with the content of the web-quest is an 
important stage in the design of a web resource and corresponds to the conclusions of M. R. 
Reshma et al. [20]. An important result of the work is the addition to the system principles 
of N. N. Vekua et al. [13] to the design of the web-quest environment:
• to choose the format of the trip and make the plot socio-cultural, appropriate to the 
  needs of students;
• to prepare unreliable sources (sites with incorrect data) and a list of reliable materials;
• to provide tasks that involve a critical attitude to the selected information;
• to consider the possibility of working in mini-groups;
• not to limit to Internet resources only;
• to involve employees of cultural institutions;
• the wording of the assignment should assume only one correct interpretation;
• to make a logical conclusion and exit from the space of the web-quest.

Conclusion

So, the proposed system of classes involving specialists in the field of culture and 
art in the design of didactic web-quests for the development of their communicative 
competence includes:
• information and analytical practice (work with electronic sources and archive 
  materials, comparison and selection of digital services);
• communication activities (communication with course teachers and classmates when 
  studying materials of the courses; communication with employees of museums, 
  libraries, houses of culture; interaction with characters and objects of quest-rooms; 
  participants of quests in cultural institutions);
• education and professional development (learning the necessary languages, ways of 
  interacting with surrounding (remote) people and events, gaining skills to work in a 
  socio-cultural environment);
• solving practice-oriented tasks (application of knowledge and skills for communication 
  while completing specific tasks on the history of the city, cultural events);
• collaboration (group work on the plot, the interior of the quest-room).

Based on the results of the experiment, we conclude that the activities of specialists in 
the field of culture and art in designing web-quests can provide additional conditions for the 
development of these components of communicative competence due to the following factors:
• search for information for the plot of a web-quest (if necessary, translation from a 
  foreign language, or vice versa);
• search for a place to implement a web-quest (a potential practice base). For example, going to the library, studying the plan of leisure activities, the openness of the community to the introduction of new technology, software and technical possibilities, etc.
• formulation of the quest plot;
• studying interactive resources of the information educational environment (communication options: person-person, person-group, person-computer);
• writing texts for task cards in the web-quest;
• selection of musical accompaniment for correctly/incorrectly completed tasks.

The educational information obtained during the design of such a web-quest is immediately applied in practice, increasing the gaming and, consequently, the social level of the participant. Indeed, for most modern young people, the scale of values necessarily includes a social hierarchy: the distribution of roles in a group, in an everyday communication environment, in virtual space, in the game world. Therefore, the opportunity to improve your gaming, and hence social status, is one of the advantages of a web-quest as a technology for gamification of learning.

Separately, game teachers highlighted the problems of including technology in the education of specialists in the field of art and culture:
• when choosing a service, the mentor of a digital school should know the conceptual framework and the range of games with educational content;
• the mentor of the digital school has to know the methodology of designing, developing and evaluating creative project forms of activities.

The results obtained in the course of the study can be used not only to form the communicative competence of specialists in the field of art and culture, but also to develop the ideas of gamification as one of the innovative technologies of management and cognition.

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